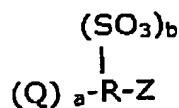


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Reply to Office Action of 8/26/05

IN THE CLAIMS :

1. (Original) A method of forming an acid dye stain resistant fiber or fibers comprising combining a masterbatch concentrate with a fiber-forming polyamide and a polymer and forming a fiber or fibers therefrom, said masterbatch concentrate comprising a reagent and a carrier therefor wherein said reagent has the formula:



wherein: Q and Z are moieties which associate with free acid dye sites in said polyamide;
a is an integer from 0 to 2;
b is an integer from 1 to 4; and
R is selected from the group consisting of aliphatic, aromatic or alicyclic hydrocarbyl groups;
and

said carrier is selected from the group consisting of:

(A) a terpolymer comprising from about 56% to about 94.5% by weight of at least one alpha-monoolefin having 2 to 8 carbon atoms, about 5% to about 40% by weight of an ethylene- α, β unsaturated carboxylic acid (1) C₁ C₄ alkyl or (2) glycidyl ester and from about 0.5% to about 4.0% by weight of an internal anhydride of an ethylenically unsaturated carboxylic acid;

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(B) a semi-crystalline thermoplastic polyester having a melting point of about 235°C or less;

(C) a semi-crystalline thermoplastic polyamide with a melting point of about 235°C or less; and

(D) mixtures thereof;

and further wherein said polymer is selected from the group consisting of (A) and mixtures of (A) with at least one of (B) and (C) wherein the percentage by weight in said polymer of internal anhydride of an ethylenically unsaturated carboxylic acid is in the range of from about 0.5% to about 4.0%.

2. (Original) The method of claim 1 comprising melt-spinning said combination of masterbatch concentrate, fiber-forming polyamide and polymer.

3. (Original) The method of claim 2 comprising combining said masterbatch concentrate, said fiber-forming polyamide and said polymer on-line in said melt-spinning process.

4. (Original) The method of claim 1 wherein said masterbatch concentrate comprises from about 20% to about 80% by weight of said reagent.

5. (Original) The method of claim 1 wherein said combination contains an amount of said masterbatch concentrate that contains between about 1,500 ppm and about 3,000 ppm of sulfur; an amount of said polymer such that the combination contains between about 0.01% to

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about 0.6% of the internal anhydride; and the remainder is said polyamide.

6. (Original) The method of claim 5 wherein at least one of said Q and Z is a carboxylic acid group or a salt thereof.

7. (Original) The method of claim 5 wherein at least one of said Q and Z is an isocyanate group.

8. (Original) The method of claim 5 wherein at least two of said Q and Z combine to form a carboxylic acid anhydride.

9. (Original) The method of claim 5 wherein said reagent is 5-sulfoisophthalic acid or a salt thereof.

10. (Previously Presented) The method of claim 9 wherein said reagent is selected from the group consisting of an alkali metal, alkaline earth metal and transition metal salt of 5-sulfoisophthalic acid..

11. (Original) The method of claim 10 wherein said reagent is the lithium salt of 5-sulfoisophthalic acid.

12. (Original) The method of claim 10 wherein said reagent is the sodium salt of 5-sulfoisophthalic acid.

13. (Previously Presented) The method of claim 9 wherein said reagent is 3-sulfobenzoic acid or the sodium or lithium salt thereof.

14. (Original) The method of claim 1 wherein, in (A), said alpha-monoolefin is ethylene.

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15. (Currently Amended) The method of claim 1 wherein, in (A), said ethylene- α,β unsaturated acid is selected from the group consisting of acrylic acid, methacrylic acid and mixtures thereof.

16. (Original) The method of claim 1 wherein, in (A), said internal anhydride of an ethylenically unsaturated acid is maleic anhydride.

17. (Original) The method of claim 1 wherein, in (B), said alpha-monoolefin is ethylene.

18. (Original) The method of claim 1 wherein said carrier and said polymer may be the same or different.

19. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-6.

20. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-66.

21. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-MXD6.

22. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-11.

23. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-12.

24. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-69.

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25. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-610.

26. (Original) The method of claim 1 wherein said fiber-forming polyamide is PA-612.

27. (Original) The method of claim 1 wherein said fiber-forming polyamide is an amorphous polyamide.

28. (Original) The method of claim 27 wherein said fiber-forming amorphous polyamide is a copolymer of terephthalic acid and trimethylhexamethylene diamine.

29. (Original) The method of claim 1 wherein said combination additionally contains a fiber-forming adjuvant.

30. (Currently Amended) The method of claim 29 wherein said fiber forming adjuvant is selected from the group consisting of an anti-oxidant, stabilizer, colorant, processing aid, catalyst, filler, nucleating agent, anti-microbial, melt viscosity enhancer and mixtures thereof.